

REMARKS

Claims 1 through 10 have been rejected under 35 U.S.C. §103(a) as unpatentable over Wallace et al (U.S. Patent No. 6,590,881) in view of Popovic (U.S. Patent No. 6,567,482), while Claim 11 has been rejected as unpatentable over the same two references and further in view of Wang; and Claim 12 has been rejected as unpatentable over Dent et al (U.S. Patent No. 6,243,587) in view of Wallace et al. However, for the reasons set forth hereinafter, Applicants respectfully submit that Claims 1 through 12 distinguish over the cited references, whether considered separately or in combination.

The present invention is directed to a method for synchronizing among the respective base stations within a telecommunication system of the type in which a plurality of "cells" each have a fixed base station situated therein, together with at least one mobile station. According to the invention, at least one channel that is provided for usage in the telecommunication cell is used to transmit a synchronization signal from a first base station to another base station within the telecommunication system. Thereafter, for each base station, the time differences between the corresponding time slots transmitted by the base station and received from respective other base stations are calculated. Finally, the synchronizing signals of the respective base stations are adjusted according to the calculated time differences. Claim 1 of the present application further

recites that the at least one channel is a random access channel transmitted at a frequency within a band of frequencies that is provided for communications between the base station and mobile stations.

The Office Action states at page 5 that it would have been obvious to modify the system of Wallace et al, which uses a forward link signal to receive signals from other base stations for synchronization, to use the RACH taught by Popovic. In particular, the Office Action states that Popovic teaches the use of the RACH to enable a mobile station to access a serving base station.

As indicated in its Abstract, Popovic uses complementary sequences, one of which is correlated with a received signal. This sequence "may be used as a preamble portion of a random access message transmitted by a mobile station to a base station over a random access channel" (RACH). In addition, it also states that, "the sequence may also be used as a synchronization code transmitted by the base over a synchronization channel...." The clear implication of the quoted language is that the synchronization channel is not the RACH.

Claim 1 requires that a synchronization signal be transmitted from each of the plurality of base stations to remaining base stations within their respective transmission range. Popovic, on the other hand, teaches the use of the RACH only between a mobile station and a base station, as is conventional in the art. Moreover, the portion of the disclosure at Column 3, lines 45-64, referred to in the Office Action relates in particular to synchronization of mobile to base

station communication, not synchronization between base stations, as required by the present invention, and as recited in Claim 1. Neither Wallace et al nor Popovic teaches or suggests to the skilled person that he or she should use this particular mobile to base station channel to communicate between and synchronize among base stations, rather than the forward link signal proposed in Wallace et al.

The Office Action further indicates that Claim 12 is obvious, based on a combination of Wallace et al, Dent et al and Popovic. However, as noted previously, the present invention is concerned with synchronizing between multiple base stations by sending the synchronization signal between the base stations on the RACH. However, as noted above, Wallace does not use the RACH for this purpose; rather, it uses a forward link signal between base stations. Popovic, on the other hand, does not use the RACH between base stations to synchronize the base station. It only uses the RACH to synchronize a mobile station with the base station. Finally, Dent et al describes determining a position of a mobile unit by transmitting from the mobile unit to three receiving stations at known locations. As noted previously, it is only the mobile transmitter (102), however, which transmits to each receiving station on the RACH. There is no suggestion of using the RACH for synchronization signals between base stations. Accordingly, Applicants respectfully submit that Claim 12 also distinguishes over the cited references.

With regard to paragraph c) in Claim 1, Applicants note that the second line has been amended to restore language which was inadvertently omitted in the previous amendment.

In light of the foregoing remarks, this application should be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #3036/50901).

Respectfully submitted,



Gary R. Edwards

Registration No. 31,824

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
GRE:kms
392263v1